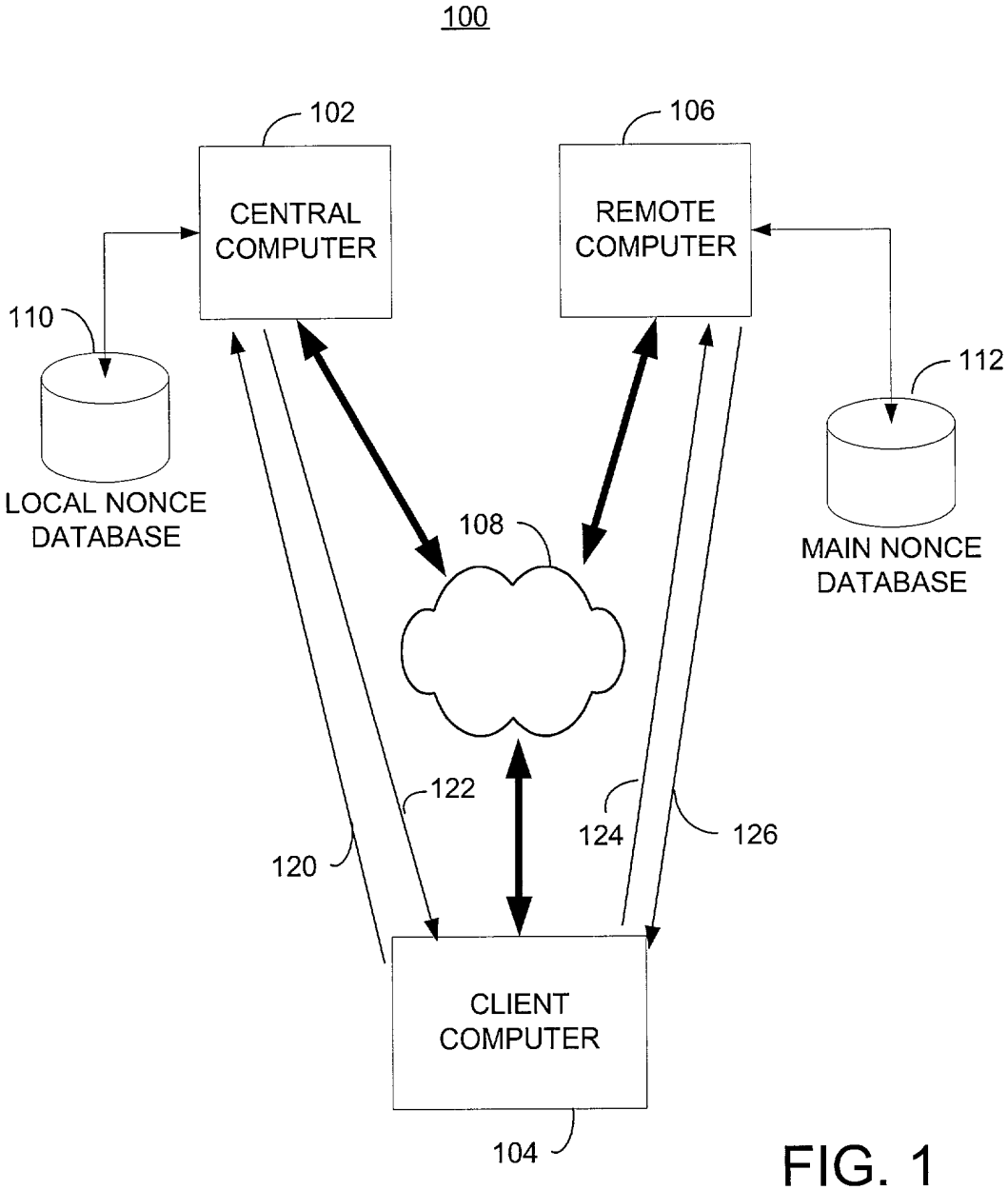

100
102
CENTRAL COMPUTER
106
REMOTE COMPUTER
110
LOCAL NONCE DATABASE
112
MAIN NONCE DATABASE
108
122
120
124
126
CLIENT COMPUTER
104

FIG. 1

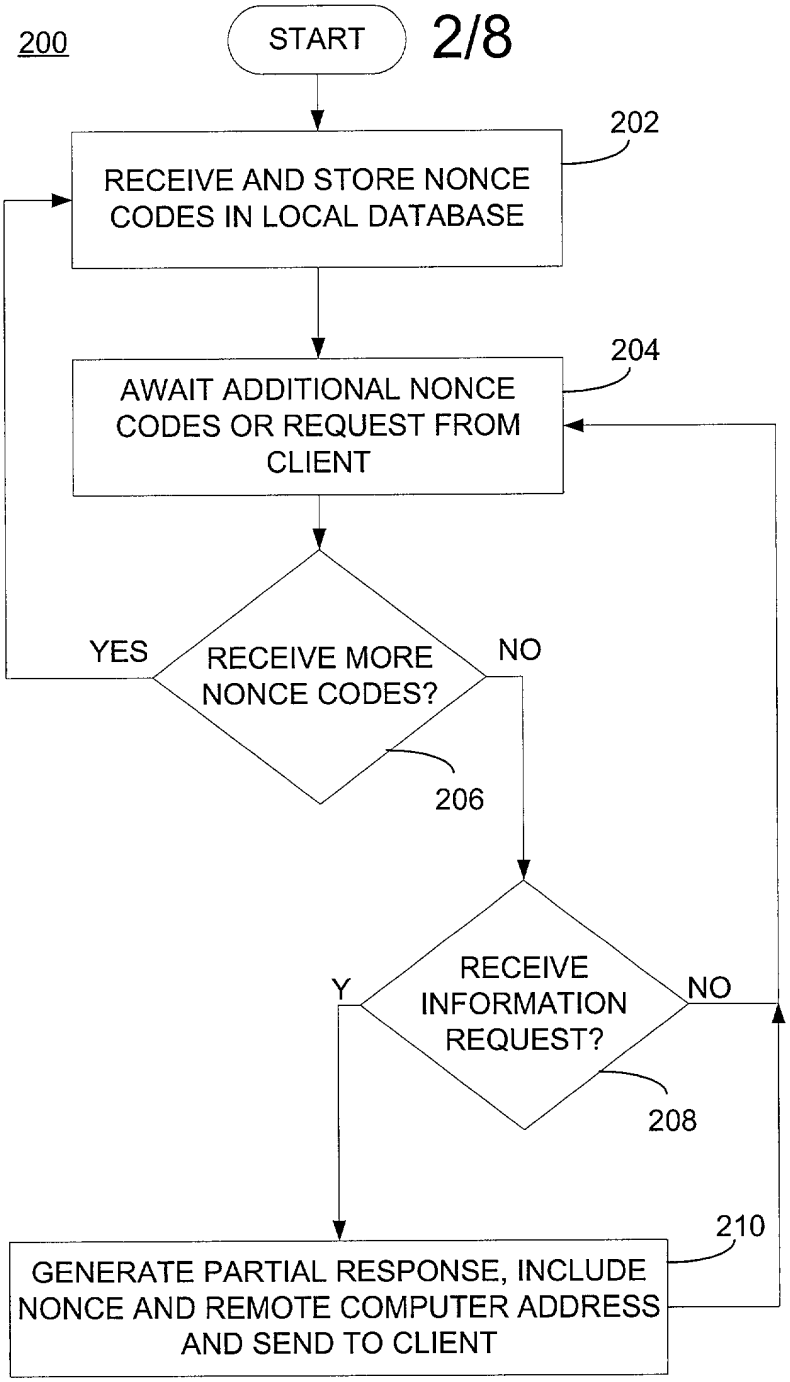
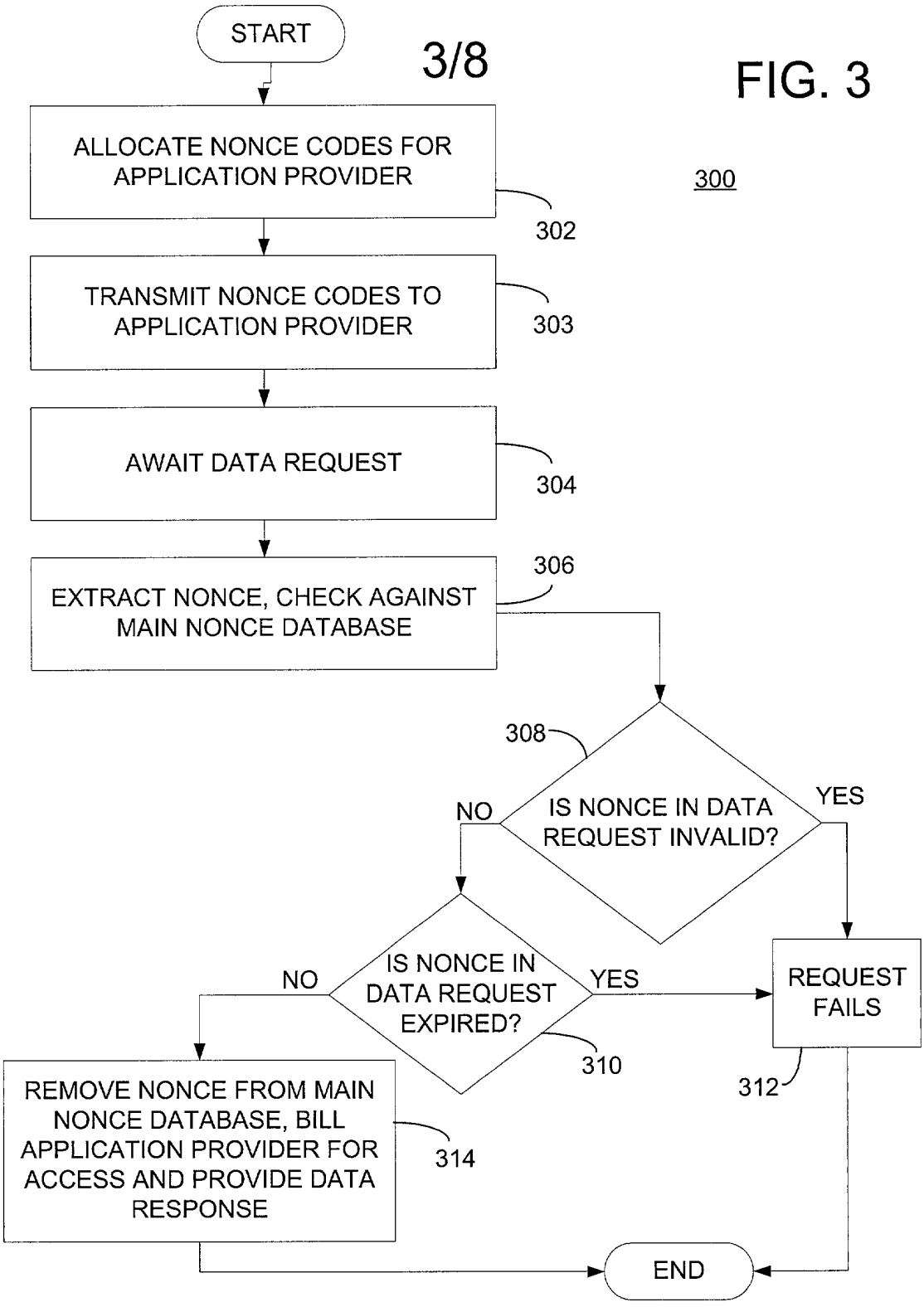

200
START
202
RECEIVE AND STORE NONCE CODES IN LOCAL DATABASE
204
AWAIT ADDITIONAL NONCE CODES OR REQUEST FROM CLIENT
YES
RECEIVE MORE NONCE CODES?
NO
206
Y
RECEIVE INFORMATION REQUEST?
NO
208
210
GENERATE PARTIAL RESPONSE, INCLUDE NONCE AND REMOTE COMPUTER ADDRESS AND SEND TO CLIENT

FIG. 2

FIG. 3


START
ALLOCATE NONCE CODES FOR APPLICATION PROVIDER
302
300
TRANSMIT NONCE CODES TO APPLICATION PROVIDER
303
AWAIT DATA REQUEST
304
EXTRACT NONCE, CHECK AGAINST MAIN NONCE DATABASE
306
308
IS NONCE IN DATA REQUEST INVALID?
NO
YES
IS NONCE IN DATA REQUEST EXPIRED?
NO
YES
310
REQUEST FAILS
312
REMOVE NONCE FROM MAIN NONCE DATABASE, BILL APPLICATION PROVIDER FOR ACCESS AND PROVIDE DATA RESPONSE
314
END

400



```
<SOAP -ENV:Envelope
        xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
        xmlns:xsi="http://www.w3.org/1999/XMLSchema-instance"
        xmlns:xsd="http://www.w3.org/1999/XMLSchema"
        SOAP-ENV:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">

<SOAP-ENV:Body>

<m:getAvailability
        xmlns:m="urn:warehouse-management" SOAP-
        ENV:encodingStyle="http://schemas.xmlsoap.org/soap/encoding/">

<nonce xsi:type="xsd:string">9028345987243579098243953245 7</nonce>

<product xsi:type="xsd:string">1SDFK213</product>

</m:getAvailability>

</SOAP -ENV:Body>

</SOAP-ENV:Envelope>
```

FIG. 4

500

```
<SOAP-ENV:Envelope
      xmlns:SOAP -ENV="http://schemas.xmlsoap.org/soap/envelope/"
      SOAP-ENV:encodingS tyle="http://schemas.xmlsoap.org/soap/encoding/"/>

<SOAP -ENV:Body>

<m:getAvailabilityxmlns:m="    urn:warehouse-management    ">

<InStockCount>123</InStockCount>

</m:getAvailability>

</SOAP -ENV:Body>

</SOAP-ENV:Envelope>
```

FIG. 5

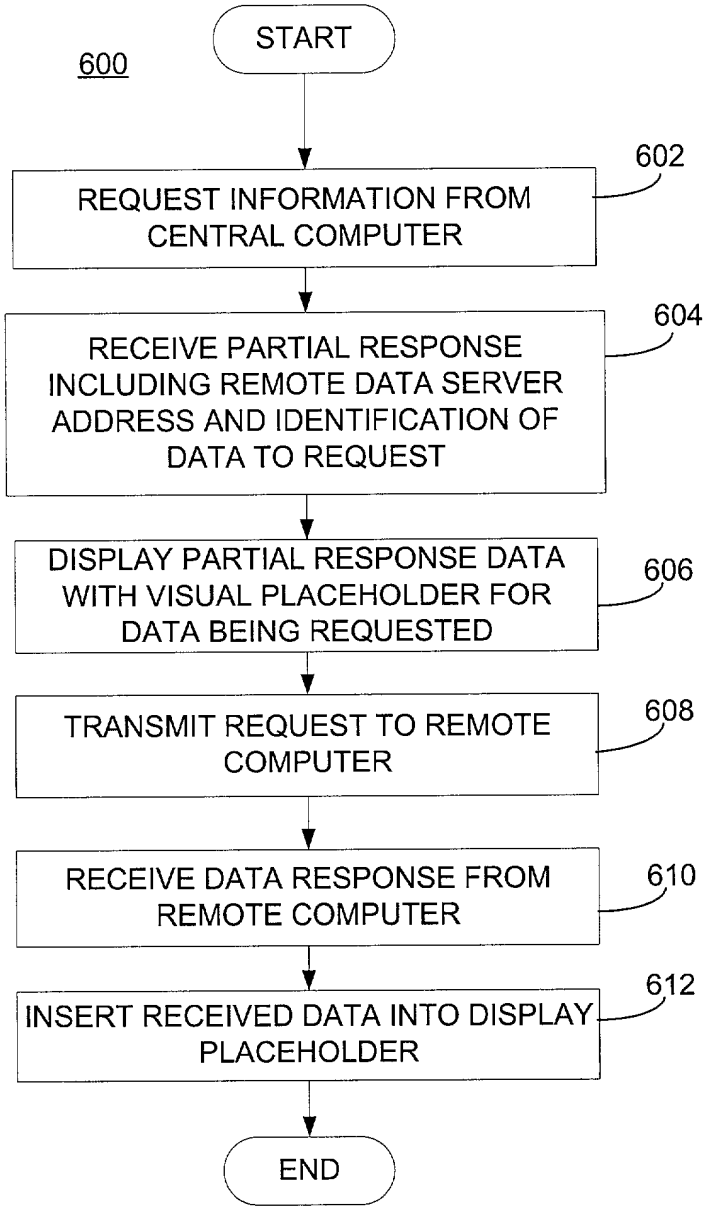

600
START
REQUEST INFORMATION FROM CENTRAL COMPUTER
602
RECEIVE PARTIAL RESPONSE INCLUDING REMOTE DATA SERVER ADDRESS AND IDENTIFICATION OF DATA TO REQUEST
604
DISPLAY PARTIAL RESPONSE DATA WITH VISUAL PLACEHOLDER FOR DATA BEING REQUESTED
606
TRANSMIT REQUEST TO REMOTE COMPUTER
608
RECEIVE DATA RESPONSE FROM REMOTE COMPUTER
610
INSERT RECEIVED DATA INTO DISPLAY PLACEHOLDER
612
END

FIG. 6

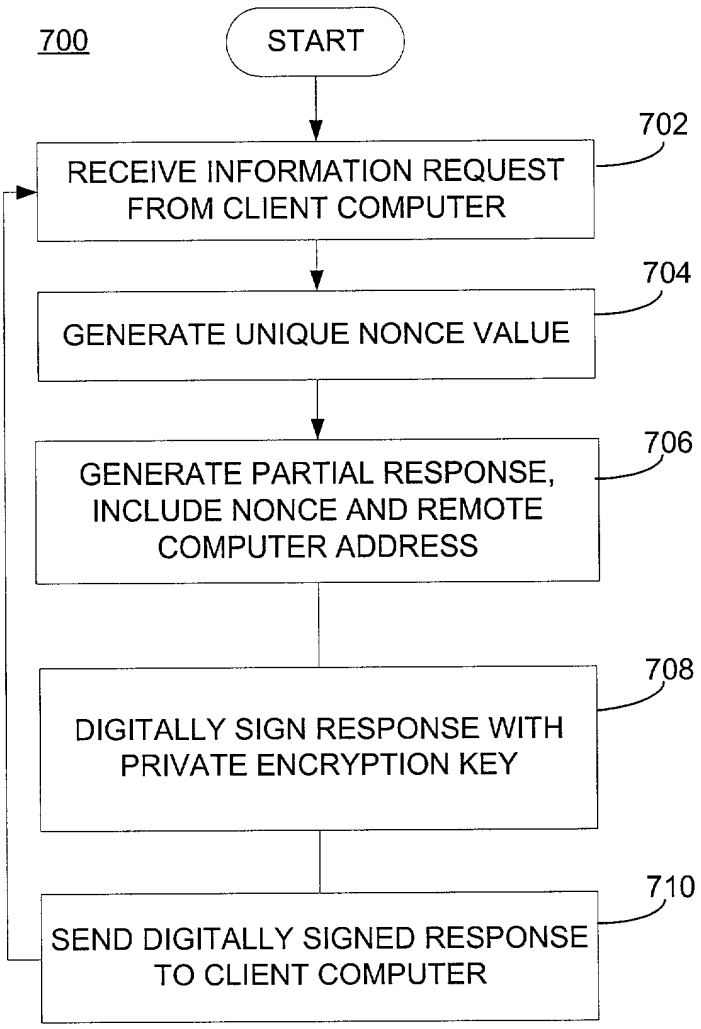
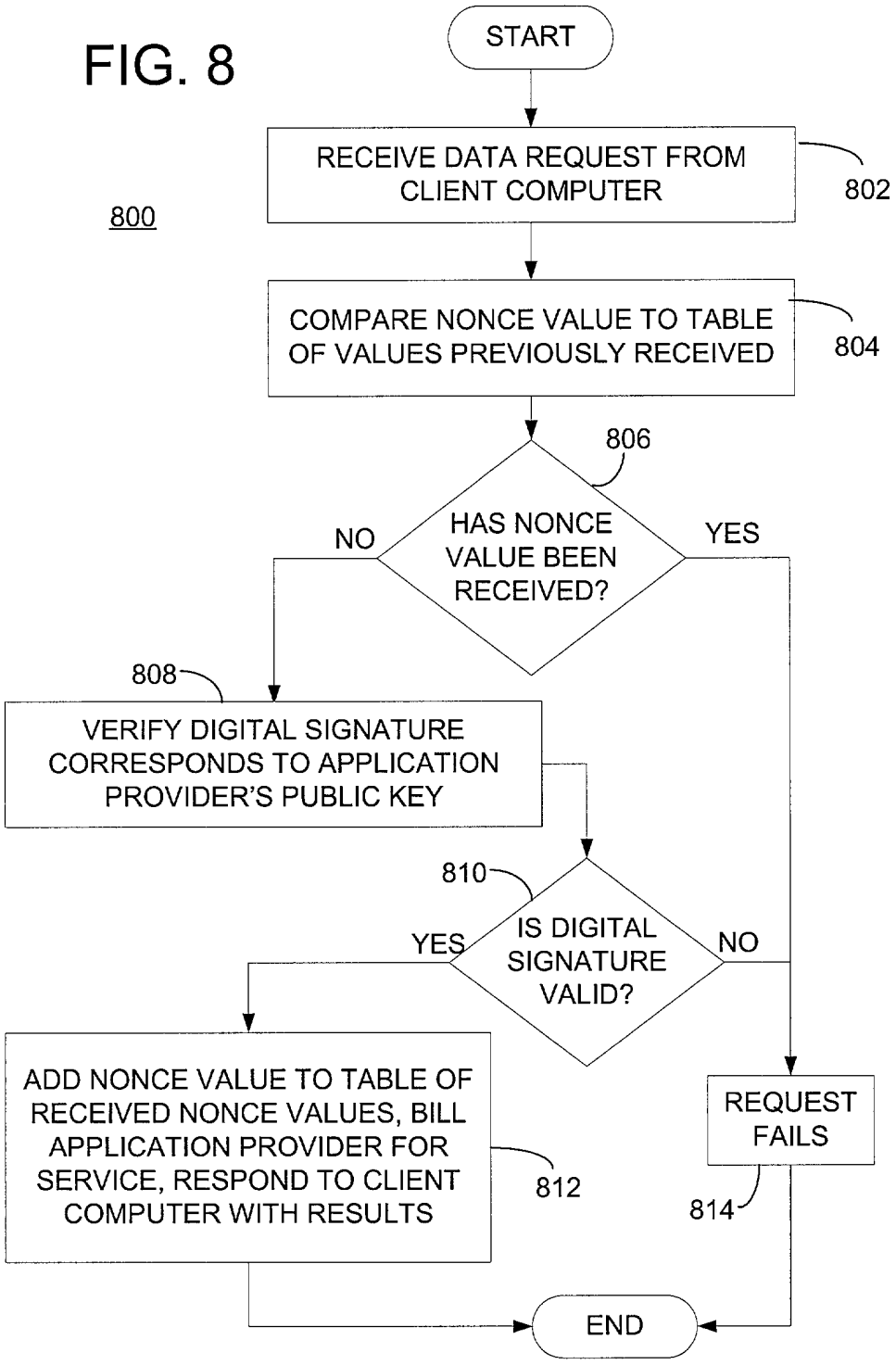

700
START
RECEIVE INFORMATION REQUEST FROM CLIENT COMPUTER
702
GENERATE UNIQUE NONCE VALUE
704
GENERATE PARTIAL RESPONSE, INCLUDE NONCE AND REMOTE COMPUTER ADDRESS
706
DIGITALLY SIGN RESPONSE WITH PRIVATE ENCRYPTION KEY
708
SEND DIGITALLY SIGNED RESPONSE TO CLIENT COMPUTER
710

FIG. 7

FIG. 8


START
RECEIVE DATA REQUEST FROM CLIENT COMPUTER
802
800
COMPARE NONCE VALUE TO TABLE OF VALUES PREVIOUSLY RECEIVED
804
806
HAS NONCE VALUE BEEN RECEIVED?
NO
YES
808
VERIFY DIGITAL SIGNATURE CORRESPONDS TO APPLICATION PROVIDER'S PUBLIC KEY
810
IS DIGITAL SIGNATURE VALID?
YES
NO
ADD NONCE VALUE TO TABLE OF RECEIVED NONCE VALUES, BILL APPLICATION PROVIDER FOR SERVICE, RESPOND TO CLIENT COMPUTER WITH RESULTS
812
REQUEST FAILS
814
END